VOL. XXI, No. 2 BULLETIN 1925-26
OF THE
AGRICULTURAL EXTENSION SERVICE, THE OHIO STATE UNIVERSITY
H. C. RAMSOWER, Director

What Poultry Demonstration Farm Records in Ohio Show

Good chickens, comfortable quarters, and proper management make the profits.

By G. S. VICKERS
and R. E. CRAY
Extension Specialists in Poultry Husbandry
The Ohio State University

THE OHIO STATE UNIVERSITY, COOPERATING WITH THE U. S. DEPT. OF AGRICULTURE
AGRICULTURAL EXTENSION SERVICE—H. C. RAMSOWER, *Director*, COLUMBUS, O.
FREE—Cooperative Agricultural Extension Work—Acts of May 8 and June 30, 1914

CONTENTS

TABLES

What Poultry Demonstration Farm Records in Ohio Show

by

G. S. VICKERS AND R. E. CRAY

Extension Specialists in Poultry Husbandry

IT is pretty generally agreed among farm economists that the success of the individual farmer depends more on his efficiency than on any other factor, and that unless he is efficient there is little opportunity of making large profits. Therefore, it is of the utmost importance that each farmer know the facts concerning his business.

There is no way of getting such facts except by the keeping of accurate records. These records enable one to analyze his business, to find the factors that are responsible for the results obtained, and to make corrections and improvements where necessary.

Several hundred Ohio poultrymen, in cooperation with the Extension Service of the Ohio State University, each year keep accurate cost account records on their poultry. The material in this bulletin is taken entirely from such records for the year 1924. There were 440 completed records, representing practically every county in the state.

The object of this bulletin is to present the material from these 440 farms in such form that the profitable and the unprofitable practices may be brought to the attention of poultrymen and farmers, and that this material may be the cause of the adoption of better practices, thereby increasing efficiency and profits.

Ohio is well located as a poultry state. It is in the cheap feed area, has an abundance of good local markets, and is within easy shipping distance of the large eastern markets. With good flocks well managed, Ohio has little to worry about concerning the future of the poultry business.

FACTS ABOUT THE DEMONSTRATION FARMS

The totals for the 400 farms are given merely for the purpose of showing the magnitude of the business. The 440 flocks contained enough hens to make 26 carloads of live poultry, produced 100 carloads of eggs, and brought in more than half a million dollars to their owners. When it is considered that these 440 farms carry only a small portion of the poultry in Ohio, some idea may be formed as to the extent of the poultry business in this state.

Table No. I.—General Data Concerning 440 Ohio Poultry Demonstration Farms for 1924

Number of flocks	440
Average number of hens	103,167
Number of hens at beginning of year	129,658
Number of hens at end of year	60,506
Per cent reduction in size of flock	53.4
Number of eggs	14,258,112
Number of dozens	1,188,176
Cash receipts	$535,981.26
Expenses	325,379.90
Feed cost	214,836.97
Cash returns above feed cost	321,144.29
Labor income	258,236.52
Investment	377,619.49
Mortality of hens	13,922
Number of hens sold or consumed on farm	55,234

The data in the following table give a cross-section or an average of the results of the 440 flocks for 1924. The poultry on these 440 farms was managed much better than is the poultry on the ordinary farm. For instance, the average Ohio hen is supposed to produce about 70 eggs per hen, as compared to 138 for those here reported. However, these data are helpful in answering questions often asked by people who are expecting to go in the poultry business or by farmers who are expecting to increase the size of their flocks. Such questions are,

"How much clear profit can I make on a hen?"

"How much does it cost to feed a hen a year?"

"How much money will a hen bring in during the year?"

Average figures answer such questions and give an idea or basis on which to figure. Conditions change from year to year, and average figures, therefore, are only indicative. People who are expecting to go out on 5 acres and get rich in the poultry business may have their dreams shattered, and those saying there is nothing in the poultry business may get their eyes opened. Both need correct information.

Table No. II.—Poultry Data Averages Based on 440 Ohio Poultry Demonstration Farms for 1924

Average number of hens for year	234
Average number of hens at beginning of year	294
Average number of hens at end of year	137
Per cent reduction in size flock	53.4
Egg production per hen	138.2
Cash receipts per hen	$ 5.19
Total expenses per hen	$ 3.15
Feed cost per hen (includes cost of rearing young)	$ 2.08
Cash returns per hen above feed cost	$ 3.11
Labor income per hen	
(a) Based on number of hens at beginning of year	$ 1.99
(b) Based on average number hens for year	$ 2.50
Investment per hen	$ 2.91
Per cent mortality per flock	10.7
Number of hens sold or consumed per flock	125
Feed cost per dozen eggs (includes cost of rearing young)	$0.181
Cost per dozen eggs (includes all expenses except labor)	$0.274
Per cent feed cost of total expense	66.3

EGG PRODUCTION

The average production per hen in the 440 flocks was 138.2 eggs. The average production in the western half of the state, according to the U. S. census for 1920, was 75 eggs per bird; and in the eastern half of the state, 65 eggs per bird. This difference is, perhaps, due to the fact that the western half of the state produces more grain and as a result the poultry is fed better.

To show the importance egg production plays in determining the profits in poultry, a comparison was made between the high ten flocks, the low ten flocks, and the average, for both the light and heavy breeds.

Relation of Egg Production to Receipts, Expenses, Labor Income, and Investment.—Table No. III shows that as the egg production decreased, the total receipts, total expenses, returns above feed, labor income, and investment decreased.

Obviously, the total receipts should decrease as the egg production per hen decreases, because the egg sales constitute the greater part of the poultry

income. Likewise, one might expect the total expense to decrease with the egg production, as higher producing flocks consume greater quantities of feed, and feed constitutes the largest part of the total expense.

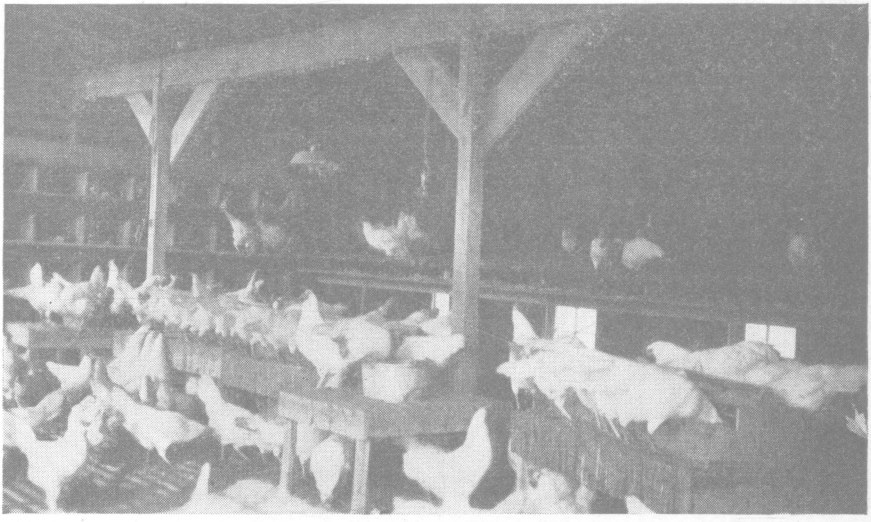
It naturally follows that, since the egg sales are the largest item of income, and since feed consumption (which increases with production) is the largest item in the expenses, the cash returns above feed and the labor income decrease as the egg production decreases.

TABLE NO. III.—*Relation of Egg Production to Receipts, Expenses, Labor Income and Investment*

Egg production classification of flocks	Breed	Egg production per hen	Total cash receipts per hen	Total expenses per hen	Cash returns above feed	Labor income per hen based on		Investment per hen
						No. hens beg'n'g. year	Average No. hens for year	
High ten flocks.....	Light	192.6	6.90	3.22	4.72	4.06	5.01	3.12
Average 227 flocks.....	Light	142.7	5.16	3.12	3.10	2.04	2.52	2.96
Low ten flocks.....	Light	94.4	3.08	2.48	1.70	1.22	1.58	2.84
High ten flocks.....	Heavy	162.8	7.72	4.62	4.68	2.65	3.74	3.42
Average 159 flocks.....	Heavy	128.4	5.35	3.39	3.13	2.02	2.62	2.96
Low ten flocks.....	Heavy	75.3	3.01	2.19	1.71	.70	.90	2.16

The correlation between the egg production and the investment indicates that the equipment and quality of stock had a direct bearing on the resulting egg production. A few poultrymen with poor equipment are getting satisfactory egg yields, but they are above the average as poultrymen.

Better stock, better laying houses, better incubators, and better brooding equipment unquestionably increase the egg production per bird. Also, these factors are the largest problems in efficient production.



Hens at the mash hopper are necessary if heavy egg production is to be obtained.

Relation of Egg Production to Feed Cost Per Hen and Per Dozen Eggs.—The records show that feed constituted 66 per cent of the total expense, hence a study of the feed cost is important.

TABLE No. IV.—*Relation of Egg Production and Labor Income to Feed Cost per Hen and per Dozen Eggs*

Egg production classification of flocks	Breed	Egg production per hen	Labor income per hen	Feed cost (includes cost of rearing young)	
				Per hen	Per dozen
High ten flocks.....	Light	192.6	$5.01	$2.18	$0.136
Averages 227 flocks...	Light	142.7	2.52	2.06	.173
Low ten flocks.....	Light	94.4	1.58	1.38	.177
High ten flocks.....	Heavy	162.8	3.74	3.04	.224
Average 159 flocks....	Heavy	128.4	2.62	2.22	.206
Low ten flocks.....	Heavy	75.3	.90	1.30	.207

Table No. IV shows that the labor incomes increased as the egg production increased; that it cost more to feed the heavy breeds than the light breeds; that the high producing flocks consumed larger quantities of feed than the low producing flocks; and that the higher production was economical, because it reduced the feed cost per dozen.

Hence, the greater the number of eggs produced, the larger the feed cost per hen, but the smaller the feed cost per dozen. This is true with the exception of the high 10 flocks in the heavy breeds, where the raising of a large number of young stock materially increased the feed cost per hen.

Relation of Egg Production to Size of Flock, Culling, and Mortality.—There is a general belief among poultrymen that to secure a high egg production, it is necessary to cull very heavily, and that the so-called "forcing" of flocks results in a high mortality.

Table No. V shows the effect of egg production on the decrease in size of flock and the mortality in the light and heavy breeds.

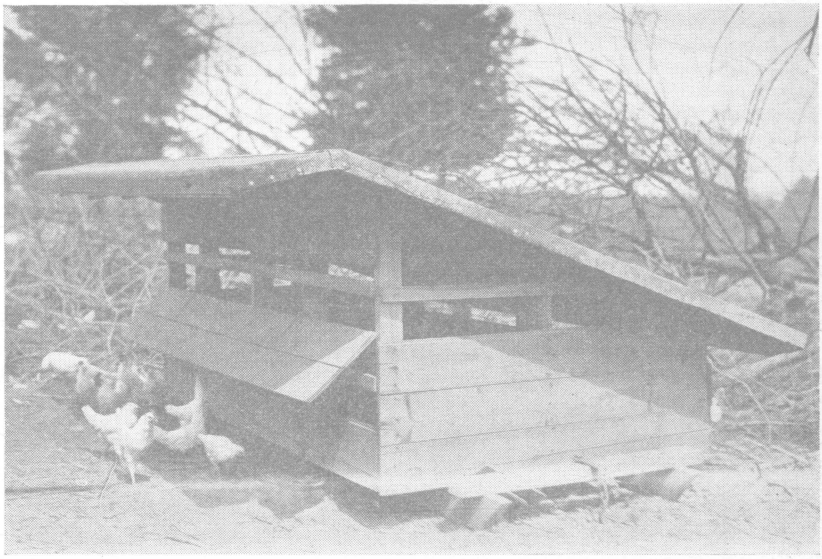
TABLE No. V.—*Relation of Egg Production and Labor Income to Size of Flock, Culling and Mortality*

Egg production classification of flocks	Breed	Egg production per hen	Labor income per hen	Average Size Flock			Per cent reduction in size of flock	Per cent mortality
				Average No. hens for year	No. hens begin. of year	No. hens end of year		
High ten flocks.....	Light	192.6	5.01	182	225	107	52.5	14.2
Average 227 flocks...	Light	142.7	2.52	310	384	180	53.1	11.3
Low ten flocks.....	Light	94.4	1.58	253	329	147	55.4	15.2
High ten flocks.....	Heavy	162.8	3.74	139	197	87	55.9	6.4
Average 159 flocks...	Heavy	128.4	2.62	132	171	71	58.5	8.9
Low ten flocks.....	Heavy	75.3	.90	148	190	83	56.3	9.8

The light breeds suffered 2.4 per cent heavier mortality than the heavy breeds, and the heavy breeds were culled 5.4 per cent more than the light breeds. Even with the more severe culling, the average production was 14.3 eggs per bird less than the production of the light breeds.

The high-producing flocks suffered a lower mortality than the low-producing flocks, and in addition were culled less. This indicates that the high-producing flocks were flocks of better quality stock, and that they were able to maintain a higher egg production with a smaller amount of culling.

This table also shows that both the high- and low-producing flocks in the light breeds were below the average in size of flock, but that with the heavy breeds the direct opposite was true, that is, the high- and the low-producing flocks were above the average in size of flock.



A labor-saving range mash hopper.

LABOR INCOME

Labor income means the net profit, or all receipts minus all expenses except labor, the difference between receipts and expenses being the amount netted for the labor expended. Expenses include feed, interest on invested capital, depreciation, insurance and taxes, miscellaneous expenses such as equipment, baby chicks, breeding stock, spraying material, etc. People keep poultry primarily to make money, and the factors that are responsible for greater profits should be known.

Relation of Labor Income to Cash Receipts, Expenses, Cash Returns Above Feed, and Investment.—Table No. VI shows that those flocks producing the greater labor income were also credited with the greater cash receipts, and that as the cash receipts decreased the labor income decreased. This is logical, as it would be impossible to make large profits unless large amounts of

products were sold. Naturally, the high-producing flocks laid more eggs and this made larger receipts possible.

Do increased receipts mean greater expenses, and if so, do these increased expenses decrease the profits? The table shows that where the profits were greater, the expenses were greater, and that as profits decreased, expenses decreased. A very large part of this increase in expense was due to increased feed costs. For instance, in the light breeds the difference in expenses between the high and low flocks was 74 cents, while the difference in labor income was $3.43. Putting it another way, 74 cents expended resulted in $3.43 profit.

It seems to be true in the poultry business as in other businesses that to make money one must spend money, and that the people who make money are those who spend, but spend wisely.

TABLE NO. VI.—*Relation of Labor Income to Receipts, Expenses and Investment*

Egg production classification of flocks	Breed	Labor Income per hen	Total cash receipts per hen	Total expenses per hen	Cash returns above feed	Investment per hen
High ten flocks.....	Light	$5.01	$6.90	$3.22	$4.72	$3.12
Average 227 flocks...	Light	2.52	5.16	3.12	3.10	2.96
Low ten flocks.....	Light	1.58	3.08	2.48	1.70	2.84
High ten flocks.....	Heavy	3.74	7.72	4.62	4.68	3.42
Average 159 flocks...	Heavy	2.62	5.35	3.39	3.13	2.96
Low ten flocks.....	Heavy	.90	3.01	2.19	1.71	2.16

The cash returns above feed, which leaves out expenses other than feed, indicate that the greater the labor income the greater the returns above feed. The cash returns above feed do not take into consideration increases or decreases in inventory, and this accounts for the labor income being greater than the cash returns above feed in some cases.

The figures on investment show that, in a general way, the flocks representing the greater investment made the larger profits, and that as the investment per hen decreased the profit per hen decreased. This would lead one to conclude that the poultrymen who made the larger profits were the ones who had the most investment in the form of better stock and better equipment.

Relation of Labor Income to Feed Cost per Hen and per Dozen Eggs.—By referring again to Table IV we may see that the flocks which made the most money were the ones that had the highest feed bills. The difference in feed cost between the high and the low ten of the light breeds was 80 cents per hen, while the difference in profit was $3.43. This shows that there is a close connection between the amount of feed used and the profits made. This also indicates that those who say feed is so high that they cannot afford to use it, or that it does not pay to feed a good ration, do not base their conclusions on facts. Very little money is to be made in the poultry business unless the birds are properly fed.

Relation of Labor Income to Size of Flock, Culling (or Reduction in Size of Flock), and Mortality.—There was not any very close relation between labor income and the size of flock. Those flocks with the highest labor incomes were not the largest flocks. With the proper care, the smaller flocks have an opportunity of making greater profits per hen. The trouble with many of the small flocks is that they do not receive the care, because they are not large enough to attract the attention of the owner. Usually, the chickens are the first livestock on the farm to be neglected.

The large flocks are seldom neglected, because the owner cannot afford to neglect them, but usually they do not do quite so well as small flocks with the same care. This accounts for the fact that in many cases the large flocks are neither the high- nor the low-profit making flocks.

Noon hour on a county poultry tour to the demonstration farms.

Table V shows there was little relation between labor income and reduction in the size of the flock. However, the flocks making the larger labor incomes probably were culled early in the summer, the owners thereby getting more for their cull hens by selling them on an earlier market at a better price, and in the saving of feed. Owners of poorer flocks apparently disposed of just as many hens, but did not do it when the hens stopped producing. They waited until later in the fall when the market was poorer, and fed them in the meantime.

There was little relation between labor income and mortality, but the tendency was for the flocks with the lower labor incomes to have greater mortality, and possibly this was one reason why the profits were lower.

In one flock in the high ten of the light breeds the mortality was very heavy, bringing up considerably the average for the high ten. The reason for the higher mortality in the poorer flocks was probably neglect.

WHAT IS THE SOURCE OF THE POULTRY INCOME?

Which are the more profitable, the light or the heavy breeds? The heavy breed adherents say the heavy breeds are more profitable, because, when the hens are sold, they bring more, being heavier, and also bring a better price per pound. The light breed adherents claim they get so many more eggs that they make more money, even though they take less for the meat.

The heavy breed people take it for granted they will get fewer eggs; and the light breed people, that they will get more eggs. One side backs its arguments with meat entirely, and the other with eggs. As a matter of fact there is no reason why one breed should not lay as many eggs as another, if they have equal breeding back of them.

To throw some light on this subject, the records on a number of flocks of both light and heavy breeds were analyzed. The flocks were grouped into high, average, and low producers. The receipts from eggs, meat (hens and broilers), and miscellaneous sources, such as breeding stock, pullets, etc., were separated and the results are shown below, and in Table No. VII.

Proportion of Receipts from Eggs, Meat, and Miscellaneous Sources.—The receipts per hen from eggs in the high producing flocks were $4.11 and $4.31 from the heavy and light breeds respectively. In the case of the heavy breeds, the egg income constituted 71.1 per cent of the total income; in the light breeds, 83.2 per cent. This shows that the eggs from both the light and heavy breeds produced the greater part of the income. When people talk about the income from different breeds of chickens and do not consider the eggs produced by each, they are leaving out the most important income item.

The light breed egg income was slightly larger, probably because the light breeds matured faster and laid a few more eggs during October and November, when eggs were at their peak in price.

The meat income in the heavy breeds constituted from 27 to 30 per cent of the total, and in the light breeds from 13 to 18 per cent. The amount from the sale of hens in the heavy breeds was greater than that from broilers, while in the light breeds the amount was about the same.

As the egg production decreased, the meat income from both hens and broilers decreased. This may seem peculiar, but the high producing flocks laid more eggs, because the pullets were hatched earlier and consequently produced more high-priced fall and winter eggs. The broilers were marketed earlier and brought in more money. The hens were culled early and sold on a high market.

On the other hand, owners of the poor producers did not cull early, and sold the culls on a poor market. In other words, owners of the high-producing flocks made more money because they were better poultrymen and better managers.

The meat income was a small item when compared to the egg item, and poultrymen should keep this in mind regardless of the breed kept. Anyone who keeps poultry primarily for the meat, forgetting the eggs, is on the wrong track unless engaged in special broiler production. On the same egg production, the heavy breeds brought in more money, mainly because of the increased meat receipts, but the low producing heavy breeds did not bring in anywhere near as much as the high producing light breeds.

Miscellaneous receipts from the sale of pullets, breeding stock, baby chicks, etc., amounted to very little. This is the reason why farmers are primarily interested in stock that will make them money from the products sold and not on the prizes it will win in the show.

TABLE No. VII.—*Proportion of Income from Eggs, Meat, and Miscellaneous Receipts*

Breed	Egg production classification	Egg production per hen	Total cash receipts	Egg receipts		Meat receipts						Miscellaneous receipts breeders, pullets, etc.	
						Hens		Broilers		All meat			
				Per hen	Per cent total	Per hen	Per cent total	Per hen	Per cent total	Per hen	Per cent total	Per hen	Per cent total
Heavy	High	153.5	$5.80	$4.11	71.1	$.95	16.3	$.66	11.3	$1.60	27.6	$.08	1.4
Light	High	153.7	5.25	4.31	83.2	.33	6.2	.41	7.6	.74	13.7	.20	3.0
Heavy	Average	128.8	4.81	3.32	68.8	.83	17.8	.60	12.3	1.42	29.5	.07	1.1
Light	Average	132.3	4.51	3.71	82.4	.34	7.9	.37	8.2	.71	16.1	.10	1.5
Heavy	Low	104.2	3.81	2.53	66.5	.70	19.2	.53	13.5	1.24	32.5	.05	.9
Light	Low	110.9	3.78	3.10	81.5	.35	9.6	.32	8.8	.68	18.5	.00	0

TABLE No. VIII.—*Relation of Egg Receipts, Meat Receipts, and Feed Costs*

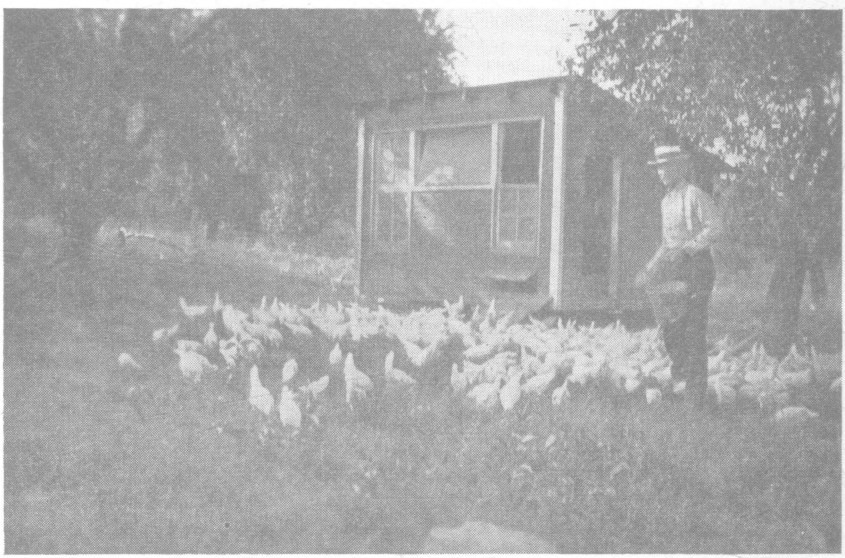
Breed	Egg production classification	Egg production per hen	Feed cost per hen	Egg receipts per hen	Egg receipts per hen over feed	Meat receipts per hen	Cash loss on meat receipts compared to feed cost	Total receipts over feed
Heavy	High	153.5	$2.32	$4.11	$1.79	$1.60	Loss $ .72	$3.47
Light	High	153.7	2.05	4.31	2.26	.74	Loss 1.31	3.19
Heavy	Average	128.8	2.10	3.32	1.23	1.42	Loss .65	2.68
Light	Average	132.3	1.85	3.71	1.86	.71	Loss 1.14	2.66
Heavy	Low	104.2	1.87	2.53	.66	1.24	Loss .63	1.89
Light	Low	110.9	1.64	3.10	1.46	.68	Loss .97	2.13

Relation of Egg Receipts, Meat Receipts, and Feed Costs.—The high-producing flocks had higher feed costs than the low-producing flocks, and the heavy breeds higher than the light breeds. It takes more feed to make more eggs, and it takes more feed to keep larger hens (see Table VIII).

The egg receipts in all cases were sufficient not only to pay all feed costs, but in the high-producing flocks left good profits. In the low-producing flocks little profit was left. Even with no income from meat, it was possible from the egg income to make a profit. The meat income, however, was not sufficient to pay feed costs in any case. If nothing but meat had been sold there would have been a loss in every case.

With the same egg production, the heavy breeds made slightly larger returns above feed than the light breeds. However, the low-producing heavy breed hens will not make as much as the high-producing light breed hens.

The poultry business as conducted on the average farm in Ohio must be essentially egg production if it is to be on a profitable basis. This is not a breed argument but one of eggs versus meat. Breeds make little difference.



A good range for the young stock is necessary to produce a profitable flock.

BREED COMPARISONS

Tables IX and X show the relative effect of the breed on the following factors: egg production per hen; size of flock; reduction in size of flock; mortality; labor income; total receipts; feed cost per hen and per dozen eggs; and investment per bird.

Because of the necessity of having the results on several flocks in order for the average to mean anything, the only averages used were those on the four main breeds and the flocks composed of two breeds.

Table No. IX shows that Leghorn records constituted more than half of those used, also, that the average size of Leghorn flocks was more than twice that of any other breed, which indicates that the Leghorn breed was more adaptable and more profitable under commercial conditions.

TABLE No. IX.—*Breed Comparisons in Relation to Egg Production, Size of Flock, Reduction in Flock, and Mortality*

Breed classification	No. flocks	Egg production per hen	Average size flock			Per cent reduction in size of flock	Per cent mortality	Total number hens
			Average No. hens for year	No. hens beginning of year	No. hens end of year			
White Leghorns	216	143.3	315	390	182	53	11.3	68,020
Barred Rocks	52	138.2	139	176	84	52.3	10.3	7,253
Wyandottes	32	133.4	114	146	68	53.5	7.9	3,657
Two Breeds	44	127.6	209	270	127	53	9.5	9,203
Rhode Island Reds	52	117.7	131	169	77	54.5	8.4	6,796
Average of 5 classifications above	396	139.2	239	300	139	53.7	10.7	94,929
Average of all breeds...	440	138.2	234	294	137	53.4	10.7	103,167

TABLE No. X.—*Breed Comparisons in Relation to Labor Income, Receipts, Expenses, and Investment*

Breed	No. flocks	Egg production per hen	Labor income per hen based on		Total cash receipts per hen	Total expenses per hen	Feed cost (includes cost of rearing young)		Investment per hen
			Number beginning	Average number			Per hen	Per dozen	
White Leghorns	216	143.3	$2.05	$2.54	$5.21	$3.15	$2.08	$.173	$2.98
Barred Rocks	52	138.2	1.89	2.39	5.19	3.52	2.16	.188	2.83
Wyandottes	32	133.4	2.16	2.77	5.60	3.71	2.30	.207	3.25
Two Breeds	44	127.6	1.62	2.10	5.30	2.92	2.03	.214	2.38
Rhode Island Reds	52	117.7	1.97	2.54	4.76	3.02	2.10	.214	2.73
Average of 5 breeds above	396	139.2	1.99	2.49	5.21	3.17	2.09	.18	2.90
Average of All Breeds	440	138.2	1.99	2.50	5.19	3.15	2.08	.181	2.91

The per cent of reduction in the various breeds was practically the same, but Leghorns and Barred Rocks suffered the greatest mortality. The feed cost per dozen increased as the egg production decreased. Aside from this, there seemed to be little correlation between the egg production of the various breeds and the various other factors.

MONTHLY ANALYSIS OF PRODUCTION AND MORTALITY

Table No. XI shows the average production per hen per month and also the monthly average for all flocks for the high ten flocks, for the low ten flocks and for a standard 160-egg flock. The averages for those reporting fell below the standard in every month except November and October.

The mortality month by month shows some variation but is fairly evenly distributed over the 12 months.

Community discussion of poultry problems will result in adoption of better practices.

TABLE NO. XI.—*Showing Monthly Analysis of Records*

Month	Per cent mortality	160-egg standard	Average 440 flocks	Egg production per hen	
				High flock	Low flock
November	.58	5	5.2	15.8	1.6
December	.99	8	6.5	17.5	3.1
January	1.25	10	6.7	16.5	3.0
February	1.1	13	9.6	18.6	3.8
March	1.51	16	14.6	23.6	8.1
April	1.59	20	16.7	24.0	11.0
May	1.47	21	17.2	23.9	10.9
June	1.2	18	15.6	21.6	8.2
July	1.22	17	15.7	21.0	7.4
August	1.4	14	13.3	20.5	6.7
September	1.4	11	9.9	17.1	4.8
October	.9	7	7.2	11.2	2.2
Total	13.8	160	138.2	231.3	70.8

SUMMARY AND CONCLUSIONS

1. The average Demonstration Farm Owner in 1924 made a labor income of $1.99 per hen based on the number of hens at the beginning of the year, and $2.50 based on the average number of hens for the year. The average egg production was 138.2 eggs per hen.

2. The greater the *egg production* per hen the greater the labor income, cash receipts, and cash returns above feed.

3. The greater the *egg production* per hen the greater the total expense, feed cost, and investment, but the lower the feed cost per dozen.

4. The high-producing flocks had slightly lower mortality than the low-producing flocks.

5. There was little relation between size of flock and egg production per hen.

6. The greater the *labor income* per hen the greater the egg production, cash receipts, and cash returns above feed.

7. The greater the *labor income* per hen the greater the total expense, feed cost, and investment.

8. There was little relation between labor income per hen and size of flock, culling, or mortality.

9. The egg income constituted 82.4 per cent of the total cash income in the light breeds and 68.8 per cent in the heavy breeds.

10. The meat income constituted 16.1 per cent of the total cash income in the light breeds and 29.5 per cent in the heavy breeds.

11. Miscellaneous receipts constituted 1.1 per cent and 1.5 per cent of the total income in the heavy and light breeds respectively.

12. The average egg production for all Demonstration Farm flocks was below the standard for a flock averaging 160 eggs in every month except October and November.

13. The mortality seems to parallel egg production, being lower in the fall and winter months and higher in the spring months.